

U. S. Patent Office
AUG 19 1955
Design Division



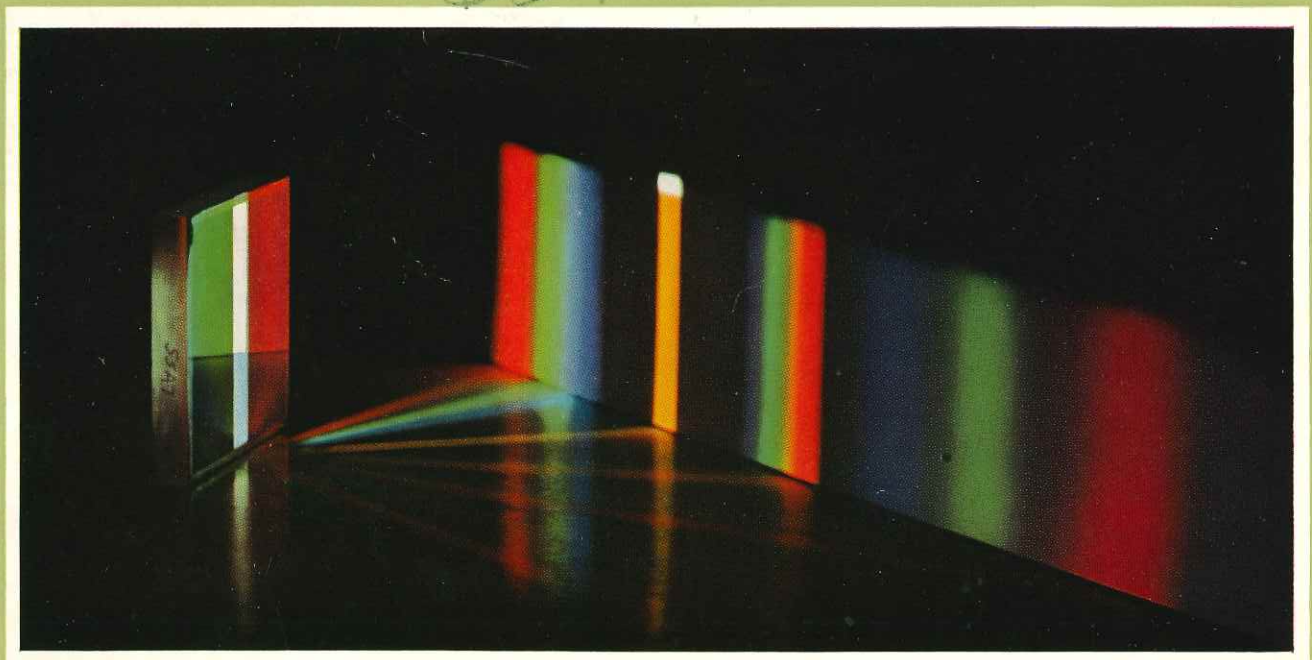
Bausch & Lomb



CERTIFIED-PRECISION

1.5 meter stigmatic grating spectrograph

D571E



3 models

each with a concave, 40mm x 80mm, high efficiency blaze

CERTIFIED-PRECISION

GRATING

Model No. 10

2200-6200, 1st order

16A/mm, 1st order

32,000, 1st order

Model No. 11

Spectrum Coverage

Continuous from

3700-7400, 1st order;
1850-3700, 2nd order

Dispersion

15A/mm, 1st order;
7.5A/mm, 2nd order

Actual Resolving Power

70,000, 2nd order

Model No. 12

4500-7000, 1st order;
2250-3500, 2nd order

10A/mm, 1st order;
5A/mm, 2nd order

50,000, 2nd order

\$1495⁰⁰
any model

Line quality equal to higher priced spectrographs, on nonferrous materials, including straight brasses, aluminum alloys, magnesium alloys, bearing alloys, zinc base die castings, lubricating oils, ceramics, pigments, dyestuffs, biological materials, pharmaceutical products, inorganic chemicals, plain carbon steels and unalloyed gray irons.

Model No. 12. For nonferrous and many ferrous samples, including low alloy steels, stainless steels, boron determinations, nickel base alloys, and oil analyses.

Stability assured by fixed position design with no moving parts.

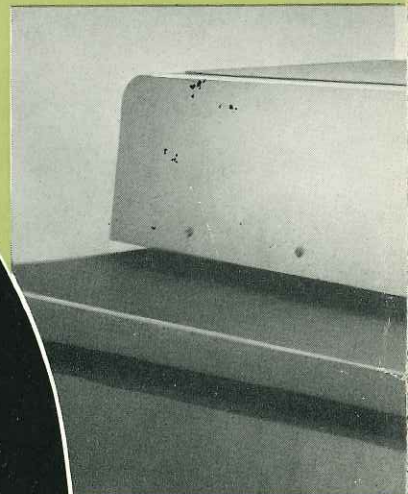
Length—68 inches, plus 36-inch accessory bar

Width (front)—22³/₄ inches

Weight—235 lbs., net. 450 lbs., gross

Height—11 inches

Suggested table size—9 feet x 30 inches



Bausch & Lomb



LOW GRADE COAL

D.C. Arc Excitation. 3000A region, including 3039A Ge line. Ge present in concentration .001%; .005%; .01%.

D.C. Arc Excitation. 3000A region, including 3039A Ge line. Ge present in concentration .001%; .005%; .01%.

You Will Take

SLITS

Fixed ruled type

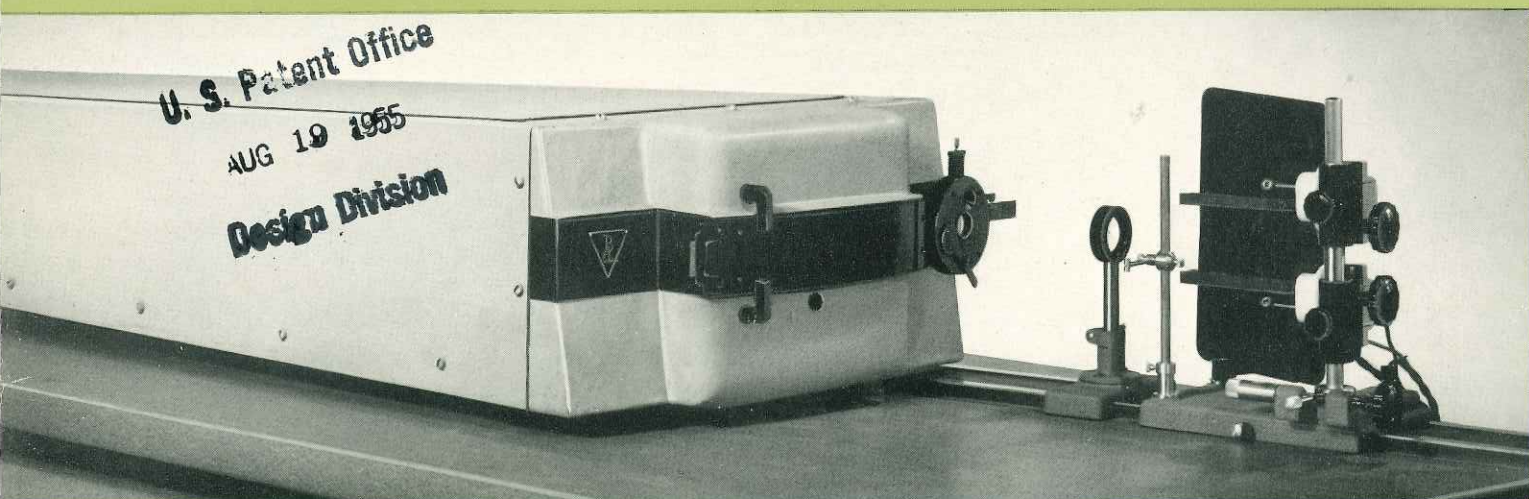
FILM HOLDER

Exposes 10" length

STIGMATIC

No masks at film

Faithfully Yours . . . in the Industrial Laboratory



CERTIFIED-PRECISION

omb 1.5 meter Stigmatic Grating Spectrograph...



ZINC DIE CASTING
Arc Excitation. 2800A region.
Including lines of Mg in
concentration of .08-.03%; Fe,
%; Pb, .007-.003%.



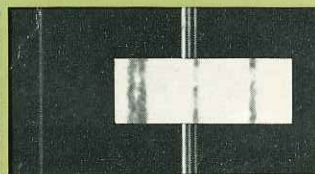
LEAD IN BLOOD
D.C. Arc Excitation, 2800A re-
gion.



LUBRICATING OIL
D.C. Arc Excitation. 3100A re-
gion, showing Fe in concentra-
tions of 10, 50, 100 ppm; Sn, 0.5,
5, 10 ppm; Cr, 5, 25, 50 ppm.



ALUMINUM ALLOY
High Voltage Arc Excitation
2500A region.



IRON ARC SPECTRUM
3100A region. Highly magnified
insert shows resolution of fourth
component of 3100A group.

Take Quality Pictures Like These... Routinely

These Spectrograms were made with a Model 11.

pe: 10 μ , 30 μ , 60 μ widths.

SPEED

Very short exposures give high sensitivity
for trace elements.

length of 35mm film.

HARTMANN SLIDE

Modified fishtail and seven
2mm step apertures.

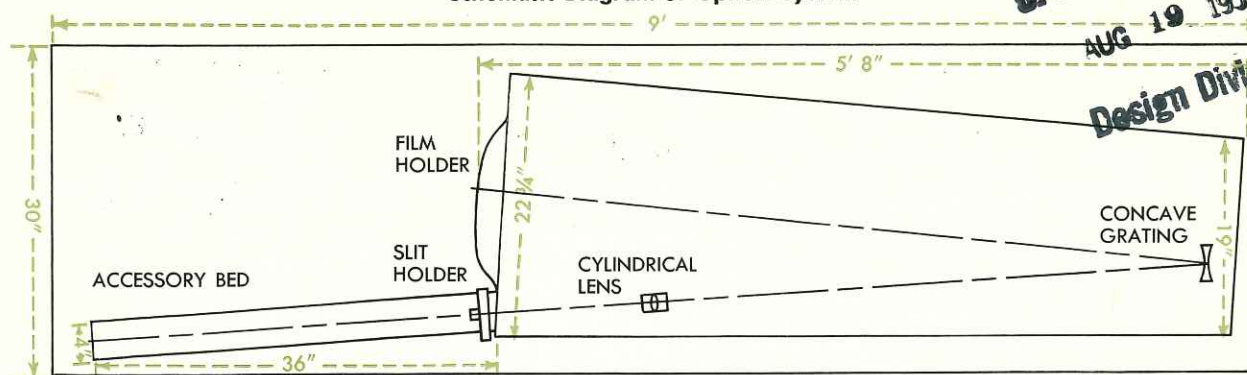
film. Accessories usable at slit.

CONVENIENCE

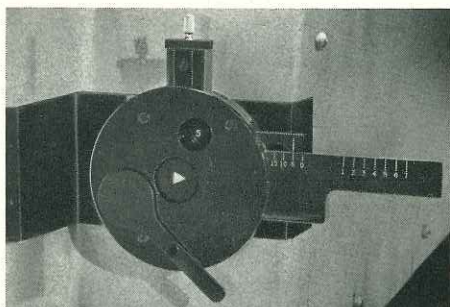
All controls and film holder at one end.

poratory — in the College Laboratory

Schematic Diagram of Optical System



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Top: concave grating; second, fixed slit holder; bottom, stigmatizing lens.

Prices are subject to change without notice. Orders are subject to acceptance at Rochester, N. Y., U.S.A., at prices prevailing at time of shipment. Orders for standard items may be cancelled if not wanted because of price advance. Excise taxes or other governmental charges will be added wherever applicable. Shipments to points outside Continental United States of America and to its territories, dependencies and possessions, except Hawaii and Alaska, are not subject to excise taxes. Delivery dates are estimated and cannot be guaranteed.

BAUSCH & LOMB OPTICAL CO.
ROCHESTER 2, N. Y., U.S.A.

CATALOG NUMBER	DESCRIPTION	PRICE
33-83-05-10	Model 10, 1.5 meter Stigmatic Grating Spectrograph only, with Certified-Precision concave grating providing dispersion of 16A/mm in 1st order; film coverage of 2200-6200A in 1st order; and resolving power of 32,000 (actual) in 1st order; fixed slit holder; fixed slit slide with three slits (10μ, 30μ, and 60μ widths); fishtail slide with seven 2mm step apertures; shutter; one film holder for 10" length of 35mm film; and with 36" length of accessory bed	\$1495.00
33-83-05-11	Model 11, 1.5 meter Stigmatic Grating Spectrograph, same as model 10, above, except with Certified-Precision concave grating providing dispersion of 15A/mm in 1st order and 7.5A/mm in 2nd order; film coverage of 3700-7400 in 1st order, and 1850-3700 in 2nd order; and resolving power of 70,000 (actual) in 2nd order	1495.00
33-83-05-12	Model 12, 1.5 meter Stigmatic Grating Spectrograph only, same as Model 10, above, except with Certified-Precision concave grating providing dispersion of 10A/mm in 1st order and 5A/mm in 2nd order; film coverage of 4500-7000A in 1st order and 2250-3500 in 2nd order, and resolving power of 50,000 (actual) in 2nd order	1495.00
ACCESSORIES		
33-83-06	Extra Film Holder with dark slide	20.00
33-83-07	Calibrating filter in rotating mount, to fit slit holder, with three transmissions of 6-100-25%	80.00
33-84-66	Open arc and spark stand, complete with eye-shield	275.00
33-84-28-01	Quartz condenser assembly, complete with clamp base for use with No. 33-84-66 Stand	80.00
42-46-50	Rheostat for arc and spark stand, 115-v., D.C., with three point switch to permit approximately 2, 4, and 9 amperes	38.00
42-46-51	Rheostat, same as No. 42-46-50, above, but for 230-v., D.C.	52.00
33-84-62	Spark generator	535.00
33-84-61	Electrodes, regraphitized, AGS regular, $\frac{5}{16}$ " dia., 12" long, in packages of 100 per pkg.	22.00
33-84-63	Electrolytic iron rod, 5mm dia., 6" long (2 required)	1.40
33-84-64-01	Sector mount, with universal motor and rheostat, 115-v., A.C.-D.C., and clamp base	80.00
33-84-59	Adjustable sector disc	66.00
33-84-70-11	Spectrum film viewing box, for 115-v., A.C.-D.C.	45.00
81-34-97-20	Spectrum magnifier, with millimeter scale, for examining spectrum plates	20.00
33-84-09	Electrode shaper with four shaping assemblies and motor for 115-v., A.C., 60-cycle	220.00

For additional accessories and replacement parts, see catalog No. D-20.